CLAIMS

1. A data storage system interfaced with a host computer and comprising:

a portable disk drive carrier adapted for hot-plug operation and including a disk drive mounted on said disk drive carrier and an external carrier connector; and

a data storage system enclosure within which system power buses are housed, said data storage enclosure having a carrier mating connector to which the external carrier connector of said portable disk drive carrier is detachably coupled, whereby electrical power from the system power buses is supplied to the disk drive of said disk drive carrier to enable said disk drive to be accessed by said host computer,

said portable disk drive carrier also including power control circuitry located between the external carrier connector of said disk drive carrier and the disk drive mounted on said disk drive carrier to control the power supplied thereto, said power control circuitry including a time delay by which power is supplied from the power buses at said data storage system enclosure to the disk drive at said disk drive carrier a particular time after the external carrier connector of said disk drive carrier is coupled to the carrier mating connector of said data storage system enclosure.

2. The data storage system recited in Claim 1, wherein said portable disk drive carrier also includes an internal disk drive mating connector and said disk drive includes a disk drive connector attached to said internal disk drive mating connector, whereby said disk drive is electrically interconnected with the external carrier connector of said disk drive carrier, the power control circuitry of said disk drive carrier being connected to said disk drive by way of the internal disk drive mating connector of said disk drive carrier and the disk drive connector of said disk drive.

3. The data storage system recited in Claim 1, wherein the power control circuitry of said portable disk drive carrier has a timer by which to establish said time delay before power is supplied to the disk drive at said disk drive carrier from the power buses at said data storage system enclosure.

4. The data storage system recited in Claim 3, wherein said power control circuitry includes an electronic switch located between one of the power buses at said data storage system enclosure and the disk drive at said portable disk drive carrier, said timer generating an output signal after said time delay by which to close said electronic switch and thereby connect the one of said power buses to said disk drive to supply power thereto.

5. The data storage system recited in Claim 4, wherein said electronic switch of said power control circuitry is a field effect transistor, the output signal generated by said timer after said time delay enabling said field effect transistor and thereby connecting the one of said power buses to said disk drive.

6. The data storage system recited in Claim 3, wherein said power control circuitry includes a first electronic switch located between a 5 volt power bus at said data storage system enclosure and the disk drive at said portable disk drive carrier and a second electronic switch located between a 12 volt power bus at said data storage system enclosure and the disk drive at said portable disk drive carrier, said timer generating an output signal after said time delay by which to close said first and second electronic switches and thereby connect said 5 and 12 volt power buses to said disk drive to supply power thereto.

7. The data storage system recited in Claim 6, wherein the 5 volt power bus at said data storage system enclosure is connected to the timer of the power control circuitry of said portable disk drive carrier to provide power to said timer and thereby initiate said time delay after the external carrier connector of said disk drive carrier is coupled to the carrier mating connector of said data storage system enclosure.

8. The data storage system recited in Claim 6, wherein each of said first and second electronic switches of said power control circuitry is a field effect transistor, the output signal generated by said timer after said time delay enabling said first and second field effect transistors and thereby respectively connecting said 5 volt and 12 volt power buses to said disk drive.

9. The data storage system recited in Claim 8, said disk drive carrier also including 5 volt and 12 volt carriers respectively connected between said first and second field effect transistors of said power control circuitry and said disk drive for supplying 5 volt and 12 volt input power to said disk drive from said 5 volt and 12 volt power buses.

10. The data storage system recited in Claim 9, wherein the disk drive of said portable disk drive carrier is a parallel ATA (PATA) disk drive, said PATA disk drive being accessed by the host computer at a host bus adapter located at said data storage system enclosure.

11. The data storage system recited in Claim 10, said portable disk drive carrier also including a serial ATA-to-parallel ATA converter connected between said PATA disk drive and said host bus adapter, whereby parallel data is transmitted from said disk drive to said adapter.

12. The data storage system recited in Claim 11, wherein said serial ATA-to-parallel ATA converter is connected to the 5 volt carrier of said portable disk drive carrier so as to be powered by the 5 volt power bus at said data storage system enclosure.

13. A portable disk drive carrier enclosing a disk drive and being adapter for hot-plug connection to a power supply to provide power to the disk drive and thereby enable the disk drive to be accessed by a host computer, said transportable disk drive carrier including a power control circuit having a timer by which to cause the power being provided to the disk drive from the power supply to be delayed until a particular time has elapsed after the connection of said disk drive carrier to said power supply.

14. The portable disk drive carrier recited in Claim 13, wherein the power supply to which said disk drive carrier is hot-plug connected includes at least one power bus, the power control circuitry of said disk drive carrier also including at least one switch connected between said power bus and the disk drive, the timer of said power control circuit generating an output signal after said particular time has elapsed for closing said switch and thereby enabling power to be provided from said power bus to said disk drive.

15. The portable disk drive carrier recited in Claim 14, wherein said at least one switch is an electrical power control switch.

16. The portable disk drive carrier recited in Claim 13, wherein the power supply to which said disk drive carrier is hot-plug connected includes a 5 volt power bus and a 12 volt power bus,

the power control circuit of said disk drive carrier also including first and second power control switches respectively connected between said 5 volt and 12 volt power buses and said disk drive, the timer of said power control circuit generating an output signal after said particular time has elapsed for closing said first and second power control switches and thereby enabling power to be provided from the 5 volt and 12 volt power buses to said disk drive.

17. The portable disk drive carrier recited in Claim 16, wherein each of said first and second power control switches is a field effect transistor.

18. The portable disk drive carrier recited in Claim 16, wherein power is supplied to the timer of said power control circuit from the 5 volt power bus of the power supply for causing said timer to begin timing following the connection of said disk drive carrier to said power supply.